

Date: Mon, 7 Nov 94 04:30:35 PST
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: List
Subject: Ham-Ant Digest V94 #368
To: Ham-Ant

Ham-Ant Digest Mon, 7 Nov 94 Volume 94 : Issue 368

Today's Topics:

2m/70cm/cellular antenna
2m bev.?
Antenna question!!!!!! Please HELP!!!!!!
Best vertical - Butternut?
High Sierra Antennas?
How much directionality to slightly inverted vee?
How much range on 80m? 40m?
Just say NO to RG58! (2 msgs)
RG8 vs "Thick Ethernet"
Twinax for feedline

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 6 Nov 1994 16:36:14 -0600
From: william@cortex.ama.ttuhsc.edu (William Biggs)
Subject: 2m/70cm/cellular antenna

I noted an earlier post to this newsgroup about the Comet SB-83
Tri-Band 146/446/cellular antenna. I am considering this as an
alternative to my present Comet B20 plus glass mount cellular.

The stats on the SB83 are better than the B20 for both 146 and 446, plus
my present glass mount supposedly give 3db gain, whereas the SB83 is
listed as 8.4 db with VSWR less than 1.5 .

B20 + cellular SB83

146	2.15 dBi	3.0 dBi
446	5.0	6.0
cellular	3 (glass mnt)	8.4

Thus, if I can believe the manufacturer's own comparisons , there should be better reception on cellular than my present glass mount, even factoring in the effect of 0.25db loss from a duplexer. There may be a trivial improvement on 2m/70cm plus only 1 antenna defacing my car.

Better cellular reception would be a real plus for me, since I frequently travel in rural West Texas where the only cellular POPs would be a few thousand head of cattle. Thus cellular coverage can get thin.

Anybody using this antenna than can verify whether it works as advertised, and whether transmitting on cellular + amateur simultaneously would have any problems with equipment ?

William Biggs
KC5JIF

Date: 6 Nov 1994 06:02:41 -0500
From: michaela@freenet3.scri.fsu.edu (Michael Christie)
Subject: 2m bev.?

If memory serves, the Beverage antenna is only a satisfactory performer up to about 7 MHz. It was originally designed [as I recall] as a mediumwave and longwave receiving antenna. Hams being hams adopted it for 160m, 80m and 40m..which pushed its physics some. 73,

Michael Christie, K7RLS/4
Crawfordville, Florida

Date: 2 Nov 1994 11:21:29 -0500
From: k8unp@bcfreenet.seflin.lib.fl.us (Peter Rimmel)
Subject: Antenna question!!!!!! PLease HELP!!!!!!

Zack Lau (KH6CP) (zlau@arrl.org) wrote:
: Scott Darragh KE6MGW (sdarragh@cisco.com) wrote:
: : I am trying to figure out a way to put up a low profile antenna. I have a
: : little room to play with in regards to how profile it is. I asked if I
: : could put up an antenna on the rain gutter and she said keep it as low
: : profile as possible.

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: On the other hand, things like traps, loading coils, and coax
: do tend to be easier to see.
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Have Fun! 73, dah-di-dah      \_/_/_/_/_/_\_   -.-.
                                \| \| \| \| \| \| \|   --.-
                                |X|
Peter Rimmel                   |X|
k8unp@bcfreenet.seflin.lib.fl.us |X|
K8UNP@N4HHP.#HWDFL.FL.USA.NOAM (packet) _|X|_
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Re best vertical...
You may think this is nuts but I have tested my mobile screwdriver antenna against my Hustler 5 band full size vertical. The screwdriver works better even without any radials. (Radials on a mobile rig are really hard to control around curves). The screwdriver method can get your antenna resonated rather than "tuning" out the reactance. I'm no engineer but I know what works for me. I got mine from Henry Stewart, WB7WMW, H. Stewart Designs, P.O. Box 643, Oregon City, OR 97045 or phone 503-654-3350. Hope this helps.
Alan Churchill AA7CV

Hi James,
I have been using one of the screwdriver antennas for nearly 3 years now and I love it. Just yesterday I was working in the shack and responded to the America3 special events station about 20 times over 2 hours. No

response. I then went for a drive, gave them a call and got a reply on my first call. The antenna really WORKS.

I took a really good look at the High Sierra at the SeaPac convention last summer in Seaside, OR. It is well built but I wanted one that was a little more "finished". I found that the screwdriver antenna is being built by Henry Stewart, WB7WMW. He spent years as a machinist and does spectacular work. I have had many complements on the unit and the price wasn't much more than High Sierra. You can contact Henry at H. Stewart Designs, P. O. box 643, Oregon City, OR 97045 or phone him at 503-654-3350. By the way, before I had Henry's antenna, I MELTED another one with a 400 watt amp. That was an interesting day. You'll love mobiling and changing bands on the go. Good luck. Alan Churchill AA7CV.

Date: Sun, 6 Nov 1994 14:56:38 GMT
From: Rick Zabrodski <zabrodsk@med.ucalgary.ca>
Subject: How much directionality to slightly inverted vee?

Keep the ladder line, put the antenna up higher.
Remember, unless the average height is close to a half wavelength or higher you will be mainly radiating up with negligible directivity. Classic inverted vees tend to be more omnidirectional as well.
My "reference antenna" and second receiver antenna in contests is an inverted vee with apex up 62 feet. There is definite directivity noted 30 thru 10 meters, almost none on 40, none at all on 80. The directivity never means I cannot hear a station, it just 1 to 4 s units down from another antenna I might be using at that time.
I have no problems with the ladder line and have used balun and balanced line link tuners. (The latter works a little better but is more finicky to tune generally.) The inverted vee legs are 42 feet each. This gives me some gain on 20 towards the US plus reasonable efficiency on 40 and 80. My shunt loaded tower works better on 80 meter dx as does the full sized 3 element monobander on 20 mno surprises there. However, the difference is not always that great.....propagation is always more important than a given antenna design!

Dr. Rick Zabrodski BSc, MD, CCFP(E) * VE6GK
EMAIL: zabrodsk@med.ucalgary.ca *
Packet: VE6GK@VE6YYC.#cgy.ab.can.na * "Power is no substitute
Phone: (403) 271-5123 Fax: 225-1276 * for skill."

On 5 Nov 1994, Peter Rimmel wrote:

> David Jenkins (djenkins@jetson.uh.edu) wrote:

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> : I've put up a ladder-fed dipole--the included angle between its legs is
> : about 170 deg. in the horizontal plane, and about 160 deg. in the
> : vertical. It is oriented roughly NW to SE, with the "vee" pointing to the
> : SW. The apex of the vee (such as it is) is at about 22'.
>
> : The center is suspended from a 18" PVC standoff attached to
> : the mast that holds our TV antenna. The mast stands off from the house
> : about 24" I have been running QRP, and the only
> : TVI we experienced was slight and on Chan 2--it was cured with filter
> : at TV.
>
> : I have heard exactly zero from the South and West--all
> : transmissions I have had are from North (mostly) and East (to some
> : extent).
>
> : Given the orientation I've described, is this directional performance
> : that I should expect? Is the house boogering the performance to S and W?
> : At what angles might I expect to get more equal performance to the South
> : (mostly) and West? Do I need to move the house?
>
> : TIA--I'm really new at this, but I know that there's lots of gotchas out
> : there, and I've probably triggered a whole raft of 'em.
>
> : David F. Jenkins
> : Decision and Information Sciences
> : University of Houston
> : KC5JRR
>
> You have very close to a classic dipole arrangement... the 10 or 20
> degrees are minor in the ways of the pattern... BUT... how many hams are
> to the south and west of Houston??? At the low 22 foot height, you are
> not going to work much of the south pacific. I suggest you get it up
> higher at the apex and get that angle to 90-100 degrees, feed it with 50
> ohm coax and use a tuner with it. You will be happy with the
> difference... good luck with it, 73, Pete K8UNP
> --
>
> Have Fun! 73, dah-di-dah
>
> Peter Rimmel
> k8unp@bcfreenet.seflin.lib.fl.us
> K8UNP@N4HHP.#HWDFL.FL.USA.NOAM (packet)
>
>

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Date: 3 Nov 1994 08:30 -0500

From: soderman@ewirb-wr.UCSD.EDU (SODERMAN.WALTER)
Subject: How much range on 80m? 40m?

I realize that a dipole should be up 1/2 wave for optimum performance, but if I have an 80 meter dipole only 12 to 15 feet up, and no surrounding interfering structures, should I be able to get "acceptable" performance for a range of say, 200 miles? That's really all I need for my application.

Date: Sun, 6 Nov 1994 04:43:27 GMT
From: davidm@iglou.com (David Michael Moore)
Subject: Just say NO to RG58!

In article <1994Nov5.013527.25932@ke4zv.atl.ga.us>,
gary@ke4zv.atl.ga.us (Gary Coffman) wrote:

> I just had to troubleshoot a piece of Andrew hardline at a packet node.
> It was open circuited. You guessed it, bad connector at the top. (Of
> course it *couldn't* be the connector on the ground end could it?)

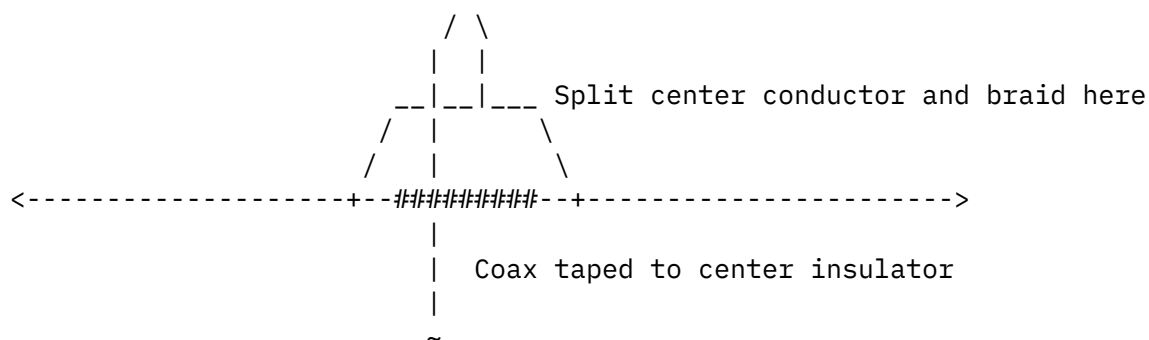
Isn't there an FCC regulation that requires all antenna and feedline problems to be atleast 50 feet up the tower? I believe it comes right after the regulations that require all antenna and feedline problems to occur on a rainy day or with temperatures below 30 degrees, and all repairs must be done in similar weather, and preferably at night time. Rumor has it that they are preparing to ban all artificial lighting from the repair site...

[Oh yeah, I guess I better drop in a few :-) :-) :-) for the humor impaired]

David KD4RMW
davidm@iglou.com

Date: Mon, 7 Nov 1994 00:16:08 GMT
From: jeffrey@kahuna.tmc.edu (Jeffrey Herman)
Subject: Just say NO to RG58!

When you feed a dipole with coax the coax is supposed to be fed through the center insulator in such a way that it forms an upside-down J so no moisture can enter:



Well, you get the idea.... The coax will last for years configured in this manner.

73,
Jeff NH6IL

--
Jeffrey Herman, NH6IL (ex: WA6QIJ, ex: NMO CW operator)
Mathematics Lecturer and tenured Ph.D. student
University of Hawaii, Central Pacific Ocean

Date: 4 Nov 1994 16:19:23 -0500
From: lrbrand@clipper.ssb.com (Larry Brandt)
Subject: RG8 vs "Thick Ethernet"

I have been using standard Ethernet thick cable for HF for a year. I have not had any problems. This is "normal" 50 Ohm teflon coated coax. I got some ends of a big roll that had not be chewed up by Ethernet vampire taps.

Is there a reason this is a bad idea? I tried to see someone 20ft once and he said it was bad cable! I find it as good as 9913 or other highpriced cable.

Any comments?
tnx es 73
AA1EA
Larry

Date: 6 Nov 1994 06:28:00 GMT
From: choffman@pinot.callamer.com (Christopher R. Hoffman)
Subject: Twinax for feedline

Christopher R. Hoffman (choffman@pinot.callamer.com) wrote:

Can anyone tell me if Networking TWIN-AX can be used as an unbalanced feeder? I salvaged a few hundred feet from a network overhaul this summer.

For those of you who don't know, This is comparable to RG8, accept that it has TWO inner conductors instead of one. This is used primarily for IBM networks.

: --
: TNX - 73's
: Chris Hoffman
: K06GA ex. KD6VLY
: choffman@slonet.org

--
TNX - 73's
Chris Hoffman
K06GA ex. KD6VLY
choffman@slonet.org

Date: 5 Nov 1994 15:29:33 GMT
From: Cecil_A_Moore@ccm.ch.intel.com

References<CyE1GH.20Fv@austin.ibm.com> <38u6vm\$mf@chnews.intel.com>,
<783894467snz@parc.demon.co.uk>
Subject: Re: Dipole question's

In article <783894467snz@parc.demon.co.uk>,
charles rodgers <chasr@parc.demon.co.uk> wrote:

>I'd be very interested to know what the feeder you use with that dipole.

Hi Charles, I use 300 ohm ladder-line but 450 ohm ladder-line is even less lossy and usually gives a lower SWR for non-resonant antennas.

>I assume that you mean 44 ft each side.

Yup, 44 ft each side. According to ELNEC, around 1.3 wavelength yields maximum broadside radiation, 3db higher than a half-wave dipole. That gives maximum broadside radiation on 20m with 88 ft. At 1.5 wavelengths there are six lobes about 1db down from the two lobes in a half-wave dipole. At 1.7 wavelengths the pattern has become a 4 lobe cloverleaf pattern with each lobe about 2db higher than a half-wave dipole. 88 ft

is 1.7 wavelengths on 17m. This antenna also has a lower angle of radiation than a half-wave dipole.

>I have used such a dipole in inverted V formation with an open wire feeder
>and it performed very well on 20m but not so on 17m.

With an 88 ft dipole, one does not get the same coverage on 17m as on 20m. A lot of hams assume that a dipole gives a broadside radiation pattern no matter what the frequency and that is not true. I chose 88 ft to get broadside East/West radiation on 20m AND almost no broadside radiation on 17m. On 17m, the radiation is NE/SW/NW/SE. On those two DX bands, that gives me coverage of most of the land areas of the world with a single fixed wire antenna. And let's face it, under the present sunspot situation, 20m is a lot better than 17m. The Maximum Usable Frequency often seems to hover around 16MHz.

Also an 88 ft inverted-V dipole would work well on 20m but not on 17m because the inverted-V configuration screws up the cloverleaf radiation pattern. Inverted-V's longer than 1.5 wavelength do not work very well. Dipoles longer than 1.5 wavelength should be horizontal.

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73, Cecil, KG7BK, 00TC (All my own personal fuzzy logic, not Intel's)

Date: 5 Nov 1994 04:27:10 GMT
From: Cecil_A_Moore@ccm.ch.intel.com

References<27OCT199408150377@ewirb-wr> <38v4q7\$5lp@chnews.intel.com>,
<31OCT199415115205@ewirb-wr>
Subject: Re: How well will it work?

In article <31OCT199415115205@ewirb-wr>,
SODERMAN.WALTER <soderman@ewirb-wr> wrote:

>With the inverted vee arrangement, the ends
>would be about 12 to 15 feet up, and the apex would be on a mast around 30 or
>35 feet up. Any ideas on this? Who makes a good mast for this?

Hi again, Walt. My masts are made out of 2x4s, 2 20' ones on bottom and one 20' one on top. Cost was negligible. My advice is to put up two of them.

>And, insofar as the 450 ohm ladder line is concerned...how do I connect a
>balanced line like the ladder line to my coax port on my xcvr which already
>has a built-in antenna tuner? Walt KE4QOH

Coax to a 4:1 balun like the Amidon HBHT200 and ladder-line from there on. But don't be surprised if your built-in antenna doesn't match the antenna

system on all bands. External antenna tuners usually have a wider range of matching capabilities than the built-in ones. You may also need to change the length of the ladder-line as that will change the _measured_ SWR between your transmitter stage and your built-in antenna tuner. Good luck.

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73, Cecil, KG7BK, 00TC (All my own personal fuzzy logic, not Intel's)

End of Ham-Ant Digest V94 #368
